	Application No.	Applicant(s)
Notice of Allowability	09/505,748	SINGH ET AL.
	Examiner	Art Unit	
	Kandasamy Thangavelu	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *November 9, 2004*.

2. ☒ The allowed claim(s) is/are *1-3,6 and 13-17*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date *December 18, 20*.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

Introduction

1.   This communication is in response to the Applicants' Appeal Brief filed on

November 9, 2004. Claims 1-3, 6 and 13-17 of the application are pending.

Drawings

2.   The drawings filed on February 16, 2000 are acceptable subject to correction of

the informalities indicated on the "Notice of Draftperson's Patent Drawing Review,"

PTO-948, sent on December 18, 2002. In order to avoid abandonment of this

application, correction is required in reply to the Office action. The correction will not be

held in abeyance.

Examiner's Amendment

3.   Authorization for this examiner's amendment was given in a telephone interview with

Mr. Scott Reid on December 20, 2004.

An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

4.   In the Claims:

In Claim 1, Lines 4-6, "means for developing an accurate customizable behavioral model that offer sufficient parameters which can be programmed to represent Framers from different vendors;"

has been changed to

-- means for developing an accurate customizable behavioral model that offer sufficient parameters which can be programmed to represent Framers from different vendors, the ATM/SONET framer comprising--.

In Claim 6, Line 12, "Built-in performance checking"

has been changed to

-- Built-in performance checking.--.

In Claim 13, Line 1, "The computer base system of claim 1"

has been changed to

-- The system of claim 1 --.

In Claim 14, Line 1, "A computer base method for system level verification and performance characterization comprising"

has been changed to

-- A computer based method for system level verification and performance

characterization of an ATM/SONET framer comprising --.

In Claim 14, Line 3, "providing a customized behavioral model of an ATM/SONET

Framer"

has been changed to

-- providing a customizable behavioral model of an ATM/SONET Framer --.

In Claim 17, Line 1, "The computer base system of claim 1"

has been changed to

-- The system of claim 1 --.

Reasons for Allowance

5.   Claims 1-3, 6 and 13-17 of the application are allowed over prior art of record.

6.   The following is an Examiner's statement of reasons for the indication of allowable

subject matter:

The closest prior art of record shows:

(1) a system for specifying, synthesizing, analyzing, simulating and generating circuit

designs for frame protocols; a GUI allows the user to generate a HDL file for the protocol, in

accordance with the parameters entered; the software converts the user input to the format of the

frame definition database; then the software translates the protocol into an intermediate virtual

circuit; after the HDL is generated, the user can simulate the operation of the HDL with the

protocol; the simulation may use any of the commercially available simulators using an interface

provided to interface with the GUI; the user can perform various analysis functions on the virtual

circuit using the GUI (**Seawright et al.**, U.S. Patent 5,920,711);

       (2) simulation techniques used in ATM ASIC developments for 155Mbps ATM SAR

chip with SDH framer, for a 622 Mbps bi-directional ATM layer processing chip and a 622

Mbps ATM physical layer chip; the segmentation block segments the packets in the PCI memory

into ATM cells; the reassembly reads the ATM cells from the cell buffer and reassembles them

into PCI memory; FIFO is used with cell buffer for speed adaptation; UTOPIA interfaces with

physical layer; STM framer performs 155 Mbps physical layer processing; PCI's master and

slave functions are verified with other ATM functions using simulation; the test bench used

Verilog and included the ASIC chip, the ATM layer processes and TX_ATM and RX_ATM for

simulating upper ATM processing, sending and receiving ATM cells through UTOPIA interface

(**Kim et al.,** "Design and simulation of three ATM ASICs", IEEE 1999);

       (3) a framer that provides a versatile solution for transporting ATM cells over the

SDH/SONET network at 6223.08 or 155.52 megabits/sec. In the framer's transmit path, the

ATM cells from the SAR unit are transferred to the transmit FIFO according to the 16 bit

UTOPIA interface specification; the SDH framer maps the ATM cells into the payload of the

STM-4c/STM-12c frames; the SDH or SONET frames are formed in compliance with ITU-T or

ATM forum specification; in the receive path, the SDH/SONET frames are passed to the SDH

deframer; the SDH deframer descrambles the received frame and extracts and delivers the ATM

cells to the ATM receive FIFO buffer (**Koziotis et al.,** "0.6/spl mu/m CMOS, 666/155 Mbits/s

ATM-SDH/SONET framer IC", IEEE October 1999); and

(4) an interface for interconnecting Physical layer devices to link layer devices with a

pocket over SONET implementation; the interfaces between the physical layer devices and link

layer devices are specified in the ATM forum UTOPIA level 1, UTOPIA level 2 and UTOPIA

level 3 specifications; these specifications are used for ATM cell transfer in either direction

between one or more physical devices; UTOPIA level 2 supports multiple physical devices;

UTOPIA level 3 supports point to point transfer at a maximum throughput of 3.2 Gbps (**Karr et**

al., U.S. Patent 6,668,297).

6.1   Applicants' first set of claims consists of Claims 1, 2, 13, 3 and 6.

Independent Claim 1 is directed to a computer based system employing a customizable

simulation model of an ATM/SONET framer, for system level verification and performance

characterization. The claim identifies the uniquely distinct features of:

"means for developing an accurate customizable behavioral model that offer sufficient

parameters which can be programmed to represent Framers from different vendors, the

ATM/SONET framer comprising:

a Receiver system;

a Transmitter system

wherein said Receiver system and said Transmitter system are independently

configurable and each includes a UTOPIA interface programmable to provide different

protocols;

a first group of buffers operatively coupled to the UTOPIA interface;

SONET Framer Processes including a format translator; and

a second group of buffers operatively coupled to the SONET Framer Processes".

Because the closest prior art fails to teach or fairly suggest means for developing an

accurate customizable behavioral model that offer sufficient parameters which can be

programmed to represent framers from different vendors comprising the above combination of

the limitations, as shown in Fig. 1 and Page 4, Line 23 through Page 5, Line 16 and Page 6, Line

15 through Page 14, Line 15 of the specification as claimed by the Applicants, Claims 1, 2, 13, 3

and 6 are deemed novel and allowable.

6.2   Applicants' second set of claims consists of Claims 14-17.

Independent Claim 14 is directed to a computer based method for system level

verification and performance characterization of an ATM/SONET framer. The claim identifies

the uniquely distinct features of:

"providing a customizable behavioral model of an ATM/SONET Framer which includes

independently configurable Receiver system and Transmitter system" and "providing software

for coacting with said behavioral model, said software including sufficient programmable

parameters for representing Framers from different vendors".

Because the closest prior art fails to teach or fairly suggest developing providing a

customizable behavioral model of an ATM/SONET Framer which includes independently

configurable Receiver system and Transmitter system and providing software for coacting with said behavioral model, said software including sufficient programmable parameters for representing Framers from different vendors, as claimed by the Applicants, Claims 14-17 are deemed novel and allowable.
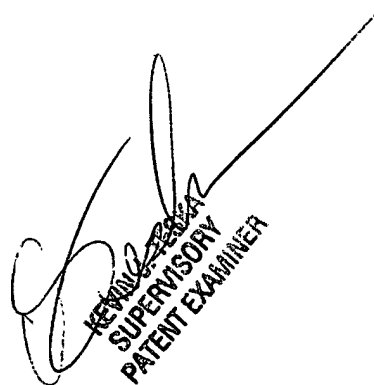
7.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on 571-272-3716. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

K. Thangavelu
Art Unit 2123
December 20, 2004